Using Open Access Maths Learning To Innovate The UK Primary Curriculum

Student Dissertation

MON: Using Open Access Maths Learning To Innovate The UK Primary Curriculum (Amy Marshall)

Cloud created by:

Amy MARSHALL
17 January 2018

In 2014 the UK government (DfE:2014) re-vamped the national curriculum implementing ICT use across all lessons. However, lack of funding, understanding and time to utilise technology during lessons has led to lack of innovation in the teaching of Primary level mathematics in the UK. Use of an open-access website to take over the 'lecture' section of maths lessons could revolutionise the facilitation of primary age children learning mathematics. Consequently, a variety of scenarios involving pupil's interactions with open access website technology can:

- free up teacher talk time
- allow for greater depth individual, peer and group learning
- allow for more one-to-one learning
- allow wider community access to primary mathematics learning

My project to create the MathsDoor - an innovative multimedia website to aid the teaching and learning of mathematical concepts in the primary classroom. The MathsDoor project intends to bring together freely accessible resources from the internet and link them in groups according to curriculum targets. The idea being that teachers can invite students to engage with the multimedia to pre-teach, learn, or master a mathematical concept alongside completing work offline, as they normally would in lessons. Whilst this may not seem revolutionary, as Heppell (2001) conjectured: 'subjugating technology into present practice,' has been commonplace for many years; however, exchanging the emphasis from teacher to student during the 'lecture' part of a maths lesson is not widely practiced.

I have discussed the MathsDoor project concept with staff members at the local primary school where I work, who are interested in the idea of students being more in control of their mathematics learning and themselves being free to engage smaller groups or individuals. The school has agreed to complete a few trial lessons utilising the website, the outcomes of which, my presentation will focus on. The purpose being, to invite discussion as to whether it is pertinent to continue developing the MathsDoor open access website and if it is a plausible proposition for innovating maths learning in the UK primary classroom. A short multimedia tour of the developed areas of the website will be given, as well as a presentation of the trials carried out in school and their analysis.

I hope to engage you all in discussion on February 19th at 9pm and thereafter. A preview of the MathsDoor website can be found at www.mathsdoor.weebly.com.

DfE (2014) *National Curriculum in England: Programme of Mathematical Studies* [Online] Available from: https://www.gov.uk/government/publications/national-curriculum-in-england-mathematics-programmes-of-study/national-curriculum-in-england-mathematics-programmes-of-study [Accessed: November 18th 2017]

Heppell S (2006) Can ICT Win the World Cup for England? [Online] Available from: http://www.heppell.net/weblog/stephen/ [Accessed: December 30th 2017]

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Claire Richardson
11:42am 24 January 2018 Permalink

Hi Amy,

Great to see your cloud about and your resource looks very interesting as well- I am looking forward to hearing more about it. My primary school aged sons love math and I think their childrens' ipad (leap pad) really developed his interest and improved his skills. There seems to be a huge range in numeracy skills within his class so I think using more technology, such as Mathsdoor, might be a great way to help teachers differentiate their teaching.

My sons have homework from a number of multimedia websites and some look very good and others do not seem very well designed and can be frustrating for everyone.

Your project seems very well developed and congratulations for integrating the trial of your website into your project. Looking forward to hearing about it.

Richard Sharp
11:18pm 24 January 2018 Permalink

Hi Amy,

Have you listened to the BBC Radio Podcast called 'The Educators'? There is an episode (date of publication 01/10/2014) featuring Salman Khan talking about the development of

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Khan Academy, that might be of interest to you. The episode includes an interview with a UK teacher using Khan Academy Maths OER videos as a flipped learning intro to subjects pre-lessons, in order to make better use of class time (@about 17mins).

Amy MARSHALL
10:42am 13 February 2018 Permalink

Thanks Richard, I've listened to the podcast - it's very much in line with what I'm suggesting for the project.

Helen Dixon
5:09pm 18 February 2018 Permalink

Hi Amy

This sounds like a really interesting project. I know my kids use a site called Alta Maths at school and I have shown them Maths Magician as well so I am looking forward to seeing your finished project. Will your site include online activities or be mainly theory based?

Good luck to tomorrow!

Dr Simon Ball
9:34am 20 February 2018 Permalink

Hi Amy

Well done on a great presentation! Here is a summary of the comments and questions you received following your presentation (including those you may have addressed verbally). Please respond in whatever way you choose.

Best wishes

Simon

- i am going to share your site with the Vocational teachers in engineering who teach maths. thank you
- Do you think working in pairs is better?
- Do maths departments work together to create materials is it all on the back of an individual teacher?
- Could they continue to use the videos at home to become 'masters of a subject'?
- I know they are young, the ones that want to put their hand up, could they learn to take notes :-) and ask when you come around? It is a life skill
- How does all this fit in with the students learning their 'Times Tables'? (cf recent media discussions)
- Thats a good point Amy, sharing of resources is generally poor across education and it needn't be

Denise McDonough
8:54pm 25 February 2018 (*Edited 9:28pm 25 February 2018*) Permalink

Hi Amy,
Your presentation and website mathsdoor is an excellent way to engage learners with maths education activities. I didn't realise they have to learn multiple methods to solve problems. It seems so simple and yet must be initiated by someone thinking outside the traditional model. I'd love to see all the teachers engaged in making one video in a Bootcamp for teachers day and get them all inspired.

I ended up disliking maths at about age 15 due to a bad teacher. (He was a bully really). Having this type of additional resource would have provided support independant of him and for learners in many situations. One of my favourite comments was that the children asked if they could do it everyday! Some shy kids may reticent if they don't like putting their hand up or have learning difficulties. This way they can anonymously keep repeating the lessons over and over until they get it. In maths, it is so important as each skills builds on to the next and must be understood to progress. Mathsdoor provides the opportunity to do it at home, especially if they don't have a parent that is available or able to help (not literate, not English speaking, etc). Additionally, the time it can free up for the teacher, reduce saying things over and over, allowing working within the class rather than at the front of the class creates a more collaborative environment.

Your delivery was well paced and an interesting mix of history, fact and practical experience and user testing. It was really great that the other teachers supported your trial - made it come to life.

A huge thanks for your support in the one on one practice sessions while I worked out how I was going to present a multimedia that doesn't play itself... and feeling it may not have value. I was really stuck and no one else was available that evening you had endless Windows updates! In addition you made time to coached me in two more practice sessions online and offered practical suggestions, critcal feedback and support. It was better or equal to the tick box feedback I got in Open Studio. I could not have done a good job without you. Timely feedback is what counts for learners, especially when there is a deadline - in collaboration online or in person (as well as the other requirements):-)

Dr Simon Ball
11:40am 26 February 2018 Permalink

Many Congratulations Amy! Your presentation has been voted by delegates to be one of the most effective of the H818 Online Conference 2018 and you are officially one of our H818 Presentation Star Open Badge Winners! Please see how to Apply for your Badge here: http://cloudworks.ac.uk/badge/view/33

Well done!

Simon

H818 Conference Organiser

Denise McDonough


9:35pm 26 February 2018 Permalink

Congrats Amy! Thanks for your support the weeks leading up to the conference. All that practice paid off. Best wishes, Denise

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